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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,673	10/01/2003	Ronald A. Askeland	10006481-4	8222

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EXAMINER

NGUYEN, LAM S

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,673

Applicant(s)

ASKELAND ET AL.

Examiner

LAM S. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 15-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 2, 6, 8, 9, 15, 19-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawase et al. (U.S. 6086272).

Referring to claims 1 and 15: Kawase et al. discloses a printhead assembly comprising:

an ink supply coupled to the printhead assembly for providing ink and a nozzle member couple to the ink supply and having plural nozzles wherein a predefined number of nozzles are intentionally offset (*FIG. 16, element 8*); and

a controller that receives print data and controls ejection of ink drops from the plural nozzles to maintain accuracy and precision of droplet placement by limiting the number of nozzles that fire at a given time while simultaneously decreasing data rate of firing of each nozzle (*FIG. 2: the number of nozzles that fire at a given time is limited by either the number of nozzles corresponding to the even or odd bit data; at the same time the data rate is reduced by as the clock is divided*) (**Referring to claim 8**) and data rate, memory, power, and ink supply are decreased (*Since a half number of all nozzles are fired at a time, the memory for storing the corresponding print data of used corresponding heaters, the power needed for firing*

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corresponding heaters, and ink supply for corresponding heaters are decreased by a factor of 2 comparing to the ones in a single pass/swath mode) (Referring to claims 2, 8, 19).

Referring to claim 6: The controller determines a firing order of the nozzles in at least one of a single or multiple swaths (*FIG. 2: the corresponding controller determines either the even-numbered nozzles or odd-numbered nozzles to be fired*).

Referring to claims 9, 20: The controller determines a firing order of the nozzles to produce an ordered pattern that reduces banding on a print media (*Abstract: Nozzles are positioned in a zigzag formation and either even or odd numbered nozzles fired (firing order) at a given time, therefore, the banding effect is reduced*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-5, 7, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase et al. (U.S. 6086272) in view of Hackeman (US 5742305). (For the rejection of claims 4-5, please see the above rejection regarding to claims 2 and 8).

Kawase et al. discloses the claimed invention as discussed above except wherein a portion of the nozzles of the nozzle member comprising heater elements for heating the ink is aligned horizontally with dot column correction.

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Hackleman discloses a printhead comprising a portion of nozzles of a nozzle member including heater elements for heating the ink (*FIG. 5, element 86*), wherein the portion is aligned horizontally with dot column correction (*column 2, line 34-40*).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to replace the nozzle member disclosed by Kawase et al. by the nozzle member having a portion of the nozzles of the nozzle member that is aligned horizontally with dot column correction as disclosed by Hackleman.

The motivation of doing so would have been to reduce the cross-talk problem between two adjacent nozzles and to allow a column of dots to print within a tolerable error criteria in order to gain the printing quality as taught by Hackleman (*column 2, line 32-34*).

Contact Information

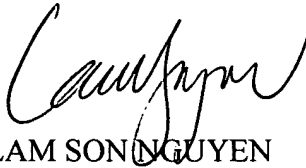
Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S. NGUYEN whose telephone number is (571)272-2151. The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LAM SON NGUYEN